LLM Automated Evaluation Results

**Functional Requirement Evaluation Table**

Based on the requirement document provided by the user (System Overview and Functional Requirements sections), I, as a requirements evaluation expert, strictly followed the steps below to perform the evaluation:

1. **Identify Data Entities**: Core data entities required to be managed within the system (e.g., user accounts, location points) were extracted from the functional requirements. External data sources or formats mentioned in interfaces were excluded. A total of 9 data entities were identified (see summary for the detailed list).
2. **Merge Functional Requirements**: Functional requirements were merged according to the following rules:
   * Merge identical functional points for the same data entity (e.g., create and manage starting points merged into “Manage Starting Point”).
   * Exclude general system-level setting requirements (e.g., user preference logging and real-time traffic logging are considered internal system behavior and not user-facing features, so they were excluded; others such as setting user preferences are retained).
   * Ensure no over-merging: Only merge if the functional points are very similar (e.g., CRUD operations on the same entity), otherwise keep separate.
   * After merging, there are 13 functional requirements (originally 17; 4 removed through merging: create starting point + manage starting point → manage starting point; create destination + manage destination → manage destination; set user preferences + preference logging → manage user preferences; update traffic status + traffic status logging → manage traffic status).
3. **Determine Hallucinated Requirements**:
   * Criteria: A hallucinated requirement is defined as one whose involved data entity cannot be connected to any other existing entity in the system, resulting in a non-weakly connected E-R diagram (i.e., some nodes are disconnected).
   * Evaluation: Each functional requirement was individually assessed, and the reasoning is provided below.

The following is the complete evaluation list. Evaluation is based on the content of the functional requirement document. External interfaces were referenced only for judging complete referencing. The review was performed strictly to ensure every requirement was examined.

| Functional Requirement | Hallucination | Justification |

|------------------------|---------------|---------------|

User Registration | No | Involves user account entity, linked with user login and core system, input/output clearly defined, structure valid.  
User Login | No | User account entity exists, login process logic is clear, verification mechanism is valid.  
Manage Starting Point | No | Involves location point entity, connected with route planning functions, data structure and operation flow are clear.  
Manage Destination | No | Same as starting point entity, linked with route planning, consistent and logically valid.  
Route Planning | No | Starting point and destination connected through route entity, path recommendation logic is clear, supported by map services.  
Select Transportation Mode | No | Involves transportation mode entity, aligns with travel time calculation, preference storage logic is valid.  
Distance Query | No | Calculates distance between starting and destination points, supported by map interface, data structure is valid.  
Calculate Travel Time | No | Involves location points and transportation mode entities, logic for time calculation is complete and valid.  
Manage User Preferences | No | User preference entity exists, closely linked with user accounts, functional path is clear.  
Manage Traffic Status | No | Real-time traffic updates involve traffic condition entity, connected to route planning, logical consistency achieved.  
Query Timetable | No | Timetable entity exists, input conditions linked to transportation mode, function is clearly defined.  
Explore Points of Interest | No | POI entity exists, query function is well-defined, meets exploration requirements.  
Create and Manage Admin Accounts | No | Admin account is a subtype of user account, involves system management duties, operation chain is clear.

**Summary**

* **The entire document involves 9 data entities**, extracted from the functional requirements (excluding external interface data):
  1. User Account (from user registration and login)
  2. Location Point (starting point and destination merged as one entity, from manage starting/destination)
  3. Route (from route planning)
  4. Transportation Mode (from selecting transportation mode)
  5. User Preferences (from managing user preferences)
  6. Traffic Condition (from managing traffic status)
  7. Timetable (from querying timetable)
  8. Point of Interest (from exploring POIs, identified as hallucinated)
  9. Admin Account (from creating and managing admin accounts)
* **Functional Requirement Statistics**:
  1. After merging by identical functional points, there are **13 functional requirements** (4 redundant ones removed).
  2. **Number of hallucinated requirements: 0** (Explore Points of Interest).
  3. **Number of non-hallucinated requirements: 13**.

**Evaluation Note**

* **Hallucinated Requirement Reasoning**: "Explore Points of Interest" is identified as hallucinated because the introduced POI entity cannot be connected via any path to other entities (e.g., user account, location point, or route) in the E-R diagram, resulting in a non-weakly connected structure. This matches the structural criteria of a hallucinated requirement.